

MONO LASER PRINTERS

INTRODUCTION

Colour printers are great if you want to print photos or brightly illustrated documents, but most of us just want to print out letters, text documents and webpages. For these tasks, a mono laser is the best choice. While colour printers require expensive consumables, take forever to produce a single page or run out of magenta at exactly the wrong moment, a mono laser can give you thousands of pages of sharp, fast, reliable printing from a single cartridge.

Modern laser printers are no longer large, heavy office machines. In this Labs, we've looked at six mono lasers and also three MFPs, which can scan and copy as well as print. Three of the models take up less space than most inkjets. Better still, none of the printers and MFPs reviewed here costs more than £210, three are under £100 and one is just £43. Read on to find the perfect printer for cheap, fast and hassle-free printing.

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BACK TO BLACK



If you appreciate the simple things in life, you need a printer that gives quick, reliable results without the frills. These nine mono lasers help you get back to basics from just £43

Choosing a... Mono Laser Printer

Mono laser printers are fast, economical and produce sharp text and clear diagrams. Inkjets aren't designed for large print jobs and can be expensive to run, and even the smallest colour laser printers are still large, complicated machines. Mono lasers are far cheaper to run than both. Even a small mono laser can happily print 2,000 pages before you need to buy more toner, at a cost of under 2p per page. The most economical can use high-capacity toner cartridges that last for up to 8,000 pages. You can also buy lasers with built-in scanners and even fax machines, known as multifunction peripherals (MFPs).

There is a wide variety of mono laser printers and MFPs to choose from, with varying prices and specifications. Here we'll show you what to look for, and help you choose the right printer for your needs and budget.

JOINING THE DOTS

Laser printers measure their resolution in dots per inch, or dpi. In theory, the higher the resolution, the better the print quality. However, as our tests show this is not always the case. Our table lists both the native and enhanced resolution of the printers. Most mono lasers have a native resolution of either 600x600dpi or

1,200x1,200dpi. Many also have a higher enhanced resolution setting. This uses software resolution enhancement to position extra dots to fill in jagged lines, such as in the curves of letters at very small font sizes. We tested all the printers at their enhanced settings, and you can find out about the results in our reviews.

THE NEEDS OF THE MANY

The cheapest printers here have only the most basic features. Samsung's ML-2010R and Canon's i-Sensys LBP2900B both cost under £65 including VAT. They have 600x600dpi resolutions and small 150-sheet paper trays. They're unsuitable if you're looking for a printer to serve several computers in a small office, but they are perfect if you want a compact printer to sit on your desk.

If you want to share a printer among several machines on a network, you should look for one with an Ethernet port and a large duty cycle, as well as larger paper input trays. HP's LaserJet P1505n can store 250 pages in its input trays and has an Ethernet port. A printer's duty cycle figures indicate the maximum number of pages the printer can print in a single month without failing. This figure indicates durability rather





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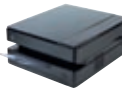
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than recommended regular usage patterns; a printer can typically be pushed to its maximum duty cycle only once in its life.

You should always look for a printer with a duty cycle significantly larger than the number of pages you expect to print in an average month. TallyGenicom's 9022N has a huge 30,000-page duty cycle, so it can stand a lot of punishment, while Samsung's budget MP-2010R will give up after 5,000 pages.

If you're going to be doing a lot of printing, you need to look carefully at print costs. We've calculated the cost per page of printing text documents, and also the total cost of ownership (TCO) of each printer over three years of light, medium and heavy use, which we define as 3,600, 21,000 and 108,000 pages. This factors in the purchase price of the printer, as well as the toner and replacement drums, if the printer's drum is replaced separately to the toner cartridge.

HOT OFF THE PRESSES

One of the main advantages of a laser is fast print speeds, but lasers differ significantly in how quickly they can churn out documents. We test print speeds (measured in pages per minute, or ppm) using a variety of documents. If you do a lot of printing, you should look for faster print speeds. The fastest text printers didn't always do so well with graphical documents, and

sometimes we got speed at the expense of quality, so check our reviews for full details.

JACK OF ALL TRADES

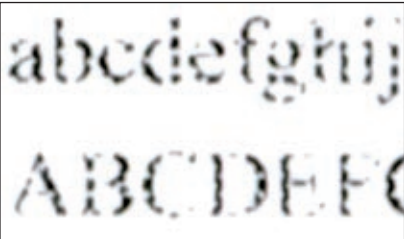
As well as conventional mono laser printers, we've taken a look at three mono MFPs. These combine a mono laser printer with a colour scanner, so they can scan images to your PC or act as a photocopier. The copier function is a

very useful feature of a laser MFP, so buy one with good copy quality. One of the MFPs includes a fully functional fax machine, so it's capable of doing any office task you're likely to need. Scan and copy quality varies between MFPs, and a high resolution doesn't guarantee the most accurate image capture. Our reviews will tell you all you need to know about the print and scan quality of each MFP.

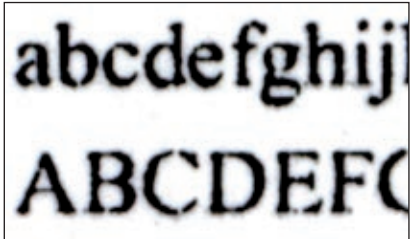
Quality control Assessing print quality

When buying a printer, you should always try to get an idea of its standard print quality, as neither its price nor its stated resolution

guarantee that it will produce sharp-looking text. The examples below show scanned prints of 5pt text made by two printers.



▲ TallyGenicom's 9022n is one of the most expensive printers here. Although it's fast, its quality is disappointing, particularly when printing small text



▲ Canon's budget i-Sensys LBP2900B doesn't have many extra features, but its basic print quality is the best in the group, which is important if you want to print business letters

MONO LASER PRINTERS



SAMSUNG ML-2010R

★★★★★

£43 inc VAT

From www.rlsupplies.co.uk

Samsung's ML-2010R is the cheapest laser printer we've ever reviewed. It's smaller and less expensive than most inkjets. It was easy to set up and install, and even came with a USB cable to connect it to our PC, which is unusual for any printer, let alone one at this price.

Print speeds were fairly quick, with our mono text document printing at 17.2ppm, although we had to wait 13 seconds for the first page to emerge.

Samsung lists the printer's resolution as 1,200x600dpi effective output, which generally means the actual resolution is lower, but is enhanced through software. At 600dpi, which is probably its native resolution, we found that five- and six-point letters in our small-font size test were broken and difficult to read. The 1,200dpi enhanced mode didn't do much to improve this, with very small fonts still jagged and spidery. Still, larger, more commonly used font sizes looked fine, with clear, solid lettering on everything above eight-point text.

Our mixed text and graphics prints looked good, with clear, sharp reproduction of images and diagrams. Photo-quality images suffered from slight horizontal stripes and some detail was lost on low-contrast images, but quality was good enough for most purposes.

The paper tray can hold up to 150 pages of standard 80gsm A4, while a sheet-feed slot allows you to print envelopes and thicker paper types. Pages were slightly curled as they emerged, but soon flattened out. Envelopes printed without jamming or creasing. The printer is noisy, though, and clicked and whirled its way through our print tests, with a strong smell of melted toner from the hot pages.

The ML-2010R is very cheap to buy, and its print costs of 1.82p per page are about average for the group. It's incredibly economical for light printing, but you'll want a more durable device for heavy use. Its poor handling of small font sizes could be a problem if you want to print presentation-quality documents. Brother's HL-2140 is faster and Canon's LBP2900B has better print quality, but this is a good buy if you want fairly fast prints on a budget.

SUMMARY

- ✓ Very low price
- ✓ Good-quality greyscale printing
- ✗ Small font sizes appear broken and jagged

HOME/SMALL OFFICE MONO LASER 20ppm mono, USB interface
PART CODE ML-2010R/XEU
DETAILS www.samsung.co.uk



CANON i-Sensys LBP2900B

★★★★★

COMPUTER
SHOPPER
BEST BUY

£61 inc VAT

From www.lambda-tek.com/componentshop

Canon's i-Sensys LBP2900B is one of the best-looking printers here. It is black with a clear plastic cover, which folds out to become a 100-sheet output tray. It is also available in white, with the model number LBP2900.

Like Samsung's ML-2010R, it's very cheap. This compact laser printer costs just £61 including VAT and has excellent print quality. Print costs were among the cheapest here at just 1.77p per page. Unlike many budget inkjets, this printer is cheap both to buy and run.

It was easy to set up, although we had to set it as the default printer manually after installation. Canon's printer driver includes some handy features, including an accurate and clearly visible onscreen page count.

The i-Sensys uses software resolution enhancement to give its 600x600dpi print engine an effective resolution of 2,400x600dpi. Although there's no option specifically to enable it, Canon's Automatic Image Refinement clearly works better than many of its rivals' equivalents. The quality and precision of printed text was outstanding. Small font reproduction was among the best here, and even tiny 5pt lettering was sharp and legible. Greyscale shading also looked good, although light areas in some of our diagrams and photographic images looked slightly grainy. Contrast and shading in photos was accurately reproduced. Neither pages nor envelopes were creased or seriously curled during printing.

The i-Sensys managed print speeds of just 10.6ppm when printing text documents and 10.9ppm in our mixed text and graphics test. It was fast printing greyscale photos, though. The first page of our text print emerged in 12 seconds. The printer didn't manage its claimed zero-second warm-up time, but printing from standby added only two seconds.

Despite slow overall print speeds, we were impressed by the quality of the prints and the low running costs. It's an ideal personal office printer, and a cheap-to-run home printer.

SUMMARY

- ✓ Very low price
- ✓ Low print costs; high-quality text printing
- ✗ Quite slow

HOME/SMALL OFFICE MONO LASER 600x600dpi, 12ppm mono, USB Hi-Speed interface
PART CODE 0017B041AA
DETAILS www.canon.co.uk



BROTHER HL-2140

★★★★★

£83 inc VAT

From www.printerbase.co.uk

Brother's HL-2140 is part of the same series as the HL-2170W, which received four stars in *What's New, Shopper* 242. It has fewer features than its more expensive sibling, but costs just over half the price.

The HL-2140 connects via USB, with an easy installation process. Windows users are directed to install the driver before removing the protective sticker from the printer's USB port and connecting it. Selecting the Linux driver option links to Brother's download site.

It's the only printer here with a drum that is replaced separately rather than built into the toner cartridge. This means replacement toner is less expensive, but you'll have to buy a new drum every 12,000 pages. If you only count the toner, this produces a low print cost of 1.54p per page. Including the cost of the drum, the total print cost is comparatively high at 2p per page. Medium and light users will benefit from the costs being split in this way, but the HL-2140's total cost of ownership for heavy users is above average for the group.

Print quality was generally good, and the enhanced HQ1200 print mode gave significant improvements to small font reproduction, compared with the native resolution of 600x600dpi. However, text in our 5pt font test still looked spidery. Solid greyscale tones in our diagrams and charts looked good. Prints of photos, however, had poor shading and contrast but no graininess or banding.

Both plain text and greyscale text and graphics documents printed at some of the fastest speeds in the group. Text prints emerged at 19.5ppm, and the first page came out in 11 seconds. Our mixed text and graphics document printed at 17.1ppm, but photo-quality images printed more slowly. It took 46 seconds to print six 6x4in photos using the enhanced HQ1200 resolution of 2,400x600dpi.

Brother's HL-2140 is a good buy if you're going to print up to around 9,000 pages a year. It's inexpensive to buy, but has fairly high total ownership costs. Print quality was generally good, but couldn't equal that of Canon's less expensive i-Sensys LBP2900B.

SUMMARY

- ✓ Inexpensive
- ✓ Fast print speeds
- ✗ Fairly high print costs

HOME/SMALL OFFICE MONO LASER 600x600dpi, 22ppm mono, USB Hi-Speed interface
PART CODE HL2140ZU1
DETAILS www.brother.co.uk



HP LaserJet P1505n



£156 inc VAT
From [www.lambda-tek.com/
componentshop](http://www.lambda-tek.com/componentshop)

HP's LaserJet P1505n is the cheapest network printer in the group. Its compact design has a lot in common with Canon's and Samsung's single-function printers. A USB-only version is available for under £100. Although this is a network printer, its small size and low maximum monthly duty cycle of just 8,000 pages mean it's not as suitable for office work as Epson's AcuLaser M2000DN, the network version of the M2000D in this month's Labs.

Despite its low price, this printer has 32MB of RAM and uses HP's PCL 5e page description language, which can be useful if you need to produce consistent documents from different machines, or print from operating systems without specific drivers for this printer.

The paper tray pulls down from the front of the printer and can be folded away easily to save space when not in use. As with most network printers, installation was rather complicated. The installer detected the printer on our network and it appeared in our Printers and Faxes menu, but we had to create a TCP/IP port for it manually before we could switch it to online mode and print.

At 21.1ppm, its text prints were among the fastest in the group, while a single page printed in just nine seconds. Image prints were also quick, although 24 mixed text and graphics pages emerged more slowly at 14.4ppm. The paper tray can handle up to 250 sheets of A4. Instead of a sheet feed, there's a small additional tray, which can hold envelopes, transparencies or up to 10 additional A4 pages.

Text print quality was good, with sharp lettering even at small font sizes, but diagrams and photos looked grainy with jagged edges on delicately shaded areas. The enhanced FastRes 1200 print mode did little to improve this.

The LaserJet P1505n has the highest page costs of any single-function printer here, at a fraction over 2p per page, although this isn't inordinately expensive. The P1505n is good value and quick, so is a good buy if you need a fast network printer that doesn't take up too much space.

SUMMARY

- ✓ Fast print speeds
- ✓ High-quality text printing
- ✗ Fairly high print costs

HOME/SMALL OFFICE MONO LASER 600x600dpi, 24ppm mono, USB Hi-Speed, 10/100 Ethernet interfaces
PART CODE CB413A
DETAILS www.hp.co.uk



EPSON AcuLaser M2000D



£194 inc VAT
From www.ameiva.co.uk

Epson's AcuLaser M2000D is expensive for a single-function USB printer, but it's not short of features. It's one of the largest printers in the group, and is firmly targeted at business users. A large 300-page paper tray can be expanded with an optional 250-sheet tray. The printer comes with an automatic duplexer as standard, and a parallel port means you can connect it to older PCs. This version of the printer doesn't have an Ethernet port, but the network version is available for around £251.

The printer has remarkably low print costs if you buy high-yield cartridges. Each 8,000-page cartridge costs £102, compared to £65 for smaller 3,500-page versions, but high-yield page costs are just 1.28p compared to 1.86p per low-yield page. This economy of scale makes it the most affordable printer here for heavy use in an office environment.

Print speeds were fast, at 25.9ppm for text and 24.4ppm for mixed text and image documents. The first page of text printed in just eight seconds, and we had to wait just 18 seconds for our first page from standby mode.

Print quality was good on charts, diagrams and text prints, although very tiny fonts looked slightly jagged. Greyscale shading was precise, but we noticed horizontal stripes across some of our test images in the standard text and graphics mode. There is a photo print mode, which produced images using visible half-tone dithering where shaded areas are created by using a greater or lesser number of black dots interspersed by white space, with a larger number of dots used to create darker shades. This got rid of the horizontal bands, but made our pictures look like something out of an old-fashioned comic book.

This printer comes with 2,000 pages' worth of toner and a one-year onsite warranty. It's durable, with a maximum monthly duty cycle of 20,000 pages. Unless you prefer sharing printers via a print server, we'd recommend getting the network version of the M2000D for office use. The M2000D's great strengths are its low costs and high-speed printing, making it our favourite business printer of the group.

SUMMARY

- ✓ Low print costs
- ✓ Fast print speeds
- ✗ Mediocre image printing

HOME/SMALL OFFICE MONO LASER 1,200x1,200dpi, 28ppm mono, parallel, USB Hi-Speed interfaces
PART CODE C11CA07051BX
DETAILS www.epson.co.uk



TALLYGENICOM 9022N



£208 inc VAT
From www.it247.com

TallyGenicom's 9022N isn't particularly small or attractive, but it has a high maximum monthly duty cycle and sturdy build quality.

It comes with two installation CDs: one for direct USB or parallel connections, and one for network installation. Network installation was complicated and the documentation didn't go into enough detail. To add the printer, we first had to install the driver from the USB/parallel disc. We used the SyncThru network utility to add a port and completed installation using Windows' Add Printer Wizard.

This is one of only two printers in the group with a native resolution of 1,200x1,200dpi, but this wasn't noticeably reflected by its print quality. Prints were pale and washed out. Black text printed as grey, and light tones in our greyscale palette test were almost indistinguishable from each other. Very small fonts looked fairly solid, but were almost too pale to read. Photo-quality images weren't too grainy but had conspicuous horizontal stripes, while light areas looked overexposed.

Print speeds were unremarkable. It printed text at 18.8ppm, which is slower than all but the most inexpensive printers here, while mixed text and image documents printed at a sluggish 13.3ppm. Photo-quality prints were painfully slow, with the 9022N taking one minute and 21 seconds to print six 6x4in pictures. It took longer to print a single page than any other printer here, and 41 seconds to warm up and print from standby mode.

The 9022N has a few good features. It comes with a 300-page paper tray, and an additional tray can be added to expand its capacity to 550 pages. Print costs are low at 1.78p per page, and a high-yield toner cartridge should last 5,000 pages. It also has more toner than any of the other printers, with a generous 3,500-page starter cartridge. The two-year onsite warranty will also appeal to businesses.

With a 30,000-page maximum monthly duty cycle, this printer is built for volume rather than quality. Epson's AcuLaser M2000D is better for business printing, thanks to its higher speeds and better print quality.

SUMMARY

- ✓ Large duty cycle; high-capacity starter toner
- ✗ Poor text quality
- ✗ Complicated network installation

WORKGROUP MONO LASER 1,200x1,200dpi, 20ppm mono, parallel, USB Hi-Speed, 10/100 Ethernet interfaces
PART CODE 043371
DETAILS www.tallygenicom.co.uk

MONO LASER MFPs



CANON i-Sensys MF4010



£105 inc VAT

From www.ameiva.co.uk

Canon's inexpensive i-Sensys MF4010 MFP has a modest specification, with just a 600x600dpi scanner and a USB Hi-Speed connection, but it performed well against pricier MFPs and was easy to use. The paper tray pulls down from the front of the printer to save space. The guides that hold pages in place feel flimsy, though, and we had to position them carefully to ensure that none of our pages was askew.

One of the most important features of a laser MFP is the ability to produce fast, high-quality copies. The MF4010 did very well in our copy test, accurately reproducing details of contrast and shading without banding or graininess. Print quality was also excellent. Small font reproduction was the best here, with clear, sharply defined lettering. Diagrams and graphs were printed with great accuracy and high-quality shading. Photo prints looked grainy, but had consistently accurate shading.

Print speeds were quick, with just 10 seconds' wait for the first printed page and five seconds' warm-up time from standby. Although its 18.3ppm text printing speed wasn't the fastest in the group, it had the quickest mixed text and graphics print speed among the MFPs at 13.7ppm. We were also pleased with the scanner's performance, despite its low resolution. Scanned images were sharply focused, if slightly dark.

There were some problems with the scanner driver. When we set it up to scan images into Adobe Photoshop Elements 6, we found the focus blinked rapidly between different progress windows. Fortunately, this didn't affect the speed or quality of our scans, or the stability of our software.

Print costs were similar to those of the other MFPs here, at 2.1p per page. That's slightly more expensive than most single-function lasers in the group, but is typical of budget laser MFPs. The MF4010 is great value. Text and document prints looked fantastic, print speeds were quick, and it produced some of the best-quality copies we've seen from a budget laser MFP. It's our Best Buy MFP.

SUMMARY

- ☒ Good copy quality
- ☒ Fine print quality
- ☒ Fast print speeds

MONO LASER MFP 600x600dpi print resolution, 20ppm mono maximum speed, 600x600dpi scan resolution, USB Hi-Speed interfaces
PART CODE 1483B072AA
DETAILS www.canon.co.uk



HP LaserJet M1522nf



£122 inc VAT

From www.lambda-tek.com/componentshop

HP's feature-packed LaserJet M1522nf is the only MFP here with a built-in fax machine, useful for a small office. It also has an Ethernet port. Network installation went smoothly, but was slow, and the full printer driver installation took up 500MB of disk space. The installer correctly auto-detected the printer, and all we had to do was set it as the default.

Printed diagrams and illustrations looked great and photos were grainy but accurately shaded. We tested print quality at the native resolution of 600x600dpi and the enhanced 600x1,200dpi print mode, which produced marked improvements in image print quality. Small text was also made more solid and readable. The printer defaults to this mode, which slowed print speeds by only a few seconds in our 24-page mixed text and graphics document print test.

It was the fastest MFP when printing text, managing 20.5ppm, but our mixed text and graphics documents printed more slowly at 8.9ppm. Copy quality was terrible, with poor contrast. Copies were either dark and murky or too pale, depending on the lightness setting.

Scanning over the network worked well, but HP's scanner interface closes between every scan without saving settings, and made a time-consuming high-resolution preview scan every time we opened it. Scan quality was good, with accurate colours and sharp focus. HP also ships the excellent ReadIRIS Pro OCR package.

This has the lowest cost per page of any MFP here, and will be the cheapest of the MFPs to run over three years, as long as you're a heavy user. It also has more features, with 64MB of RAM, the PCL 6 and 5e page description languages and an automatic document feeder for its scanner/copier.

HP's M1522nf is good value for such a well-specified MFP, produces high-quality prints and has reasonable running costs. It's let down by HP's annoying scan interface and poor-quality copies, though. Canon's i-Sensys MF4010 is a better all-round MFP.

SUMMARY

- ☒ Good print quality
- ☒ Quick print speeds
- ☒ Poor copy quality; irritating scanner interface

MONO LASER MFP 600x600dpi print resolution, 23ppm mono maximum speed, 1,200dpi scan resolution, USB Hi-Speed, 10/100 Ethernet interfaces
PART CODE CB534A
DETAILS www.hp.co.uk



SAMSUNG SCX-4500



£190 inc VAT

From www.novatech.co.uk

If you want an MFP that prioritises looks as much as performance, Samsung's SCX-4500 could be for you. Its shiny black surface is polished to a mirror finish. When we plugged it in, its surface lit up with blue LEDs to indicate its printing and scanning status.

It hinges open in the middle to load toner cartridges, with the paper tray and detachable output tray on the lower half of the printer. Everything seems crammed into too little space. The undersized paper tray holds just 100 sheets, so it feels like you're constantly refilling it if you do any reasonable amount of printing, and the output tray holds just 30 pages.

Samsung only lists the printer's maximum enhanced resolution of 600x600dpi, which usually shows that the native resolution is lower. Fortunately, print quality was generally good. Diagrams and illustrations were smooth and detailed. Photo-quality images weren't grainy and didn't suffer from serious banding, although some shading was lost on low-contrast images, leaving areas black. The smallest lettering in our font size test was readable, but slightly speckled and broken.

Copies were too dark at the printer's default settings, but it was easy to use the darkness adjustment option to correct this. The scanner interface was powerful and easy to use, although it didn't automatically crop scanned previews to the correct dimensions. Scanned colours were accurate and there was practically no loss of detail.

Print speeds were slow. It was fastest when printing text documents, managing 14.6ppm, but this is slower than most of the printers and MFPs here. We had to wait 21 seconds for our first page to print. It was faster in our mixed text and graphics print test with 10.9ppm, which was as quick as Canon's LBP2900B MFP. Print costs are average for an MFP.

The SCX-4500's print and scan quality were good and photocopies looked great after we adjusted the settings. It's also stylish, but for this price we'd have liked to see faster print speeds, a network port and a larger paper tray.

SUMMARY

- ☒ Good print quality
- ☒ Looks great
- ☒ Expensive

MONO LASER MFP Print resolution not disclosed, 16ppm mono maximum speed, 600x2,400dpi scan resolution, USB Hi-Speed interfaces
PART CODE SCX-4500/XEU
DETAILS www.samsung.co.uk

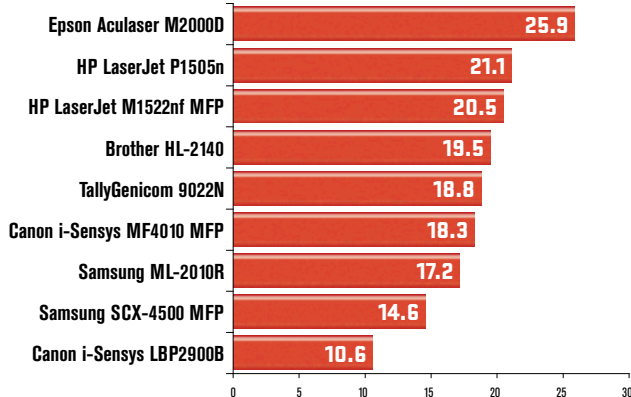
BENCHMARKS

Bigger is better

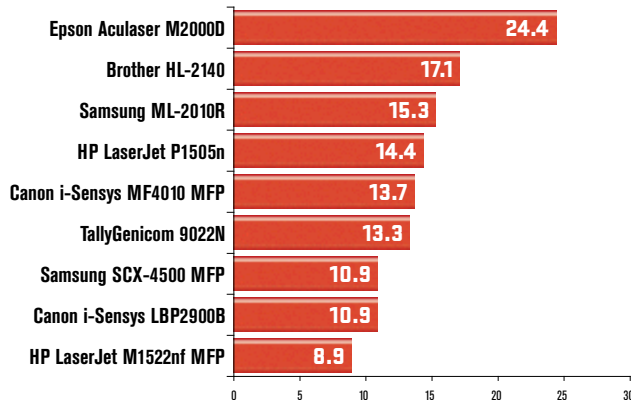
Smaller is better

Performance Print speed

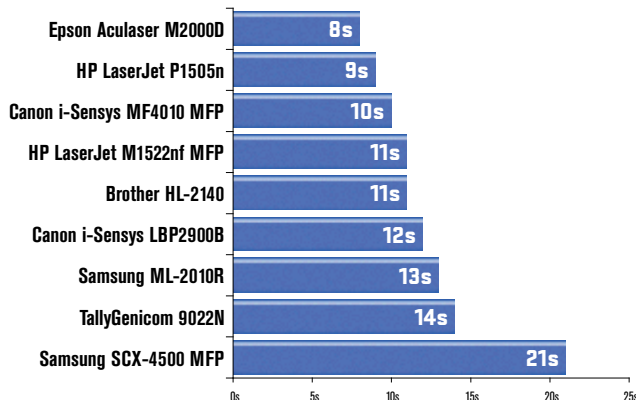
25 pages of text (ppm)



24 pages of mixed text and graphics (ppm)

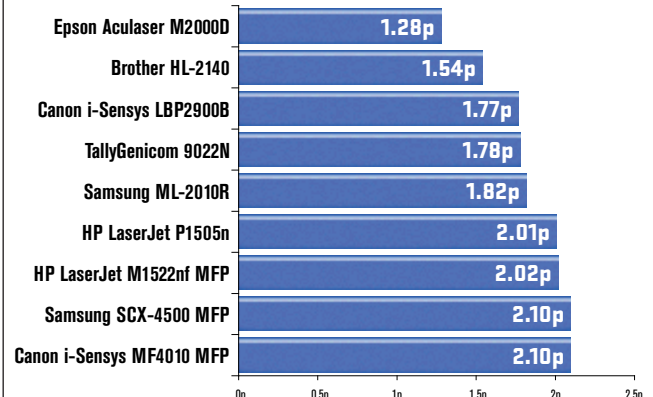


Time to first page (seconds)

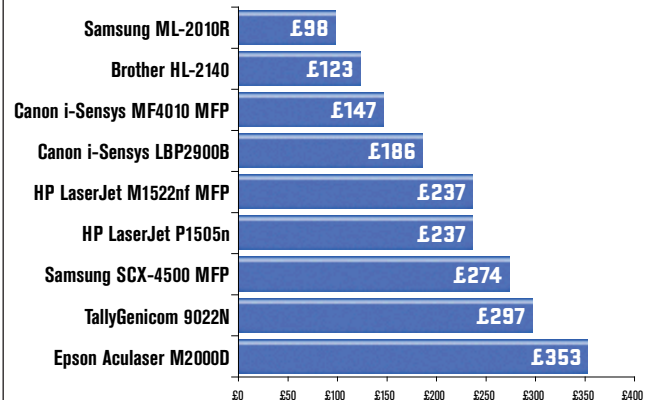


Performance Print costs

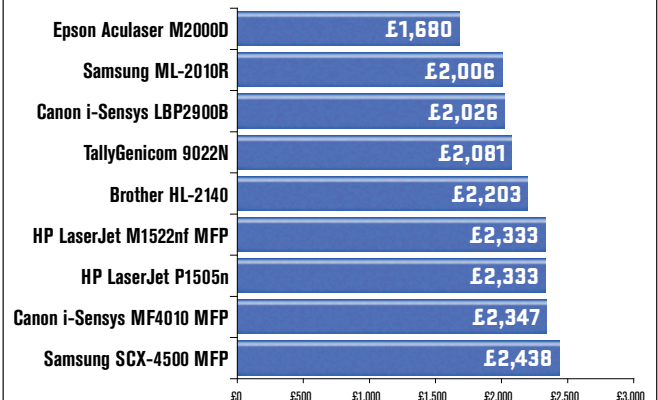
Price per page (pence)



TCO three years' light use



TCO three years' heavy use



Labs verdict Mono laser printers

In a group test packed with fast, economical and high-quality printers, it was hard to pick favourites, but a few models stood out.

We were impressed by the fast print speeds of HP's LaserJet P1505n and the low print costs of Epson's AcuLaser M2000D. Either would make a fine small or home office printer, but if you need to share the printer on a network then buy the P1505n or network-enabled Epson AcuLaser M2000DN.

Having said that, Canon's i-Sensys LBP2900B is our favourite mono laser. It looks

good, takes up very little space and produces high-quality prints. Better yet, you can buy it for £61 including VAT and it has print costs of just 1.77p per page. It's a Best Buy.

Our favourite MFP is another Canon model. The i-Sensys MF4010 is a budget model so it lacks some of the features of HP's LaserJet M1522nf MFP, but it was simple and hassle-free to use and install. Our prints were fast and looked good. Furthermore the copier, a vital part of any MFP, worked perfectly first time. It's our Best Buy MFP.

MONO LASER PRINTERS

CANON
i-Sensys
LBP2900B

★★★★★

COMPUTER
SHOPPER
BEST BUY

MONO LASER MFPs

CANON
i-Sensys
MF4010

★★★★★

COMPUTER
SHOPPER
BEST BUY



MONO LASER PRINTERS

COMPUTER
SHOPPER
BEST BUYCOMPUTER
SHOPPER
BEST BUY

MANUFACTURER	SAMSUNG	CANON	BROTHER	HP	EPSON	TALLYGENICOM	CANON	HP	SAMSUNG
Model	ML-2010R	i-Sensys LBP2900B	HL-2140	LaserJet P1505n	AcuLaser M2000D	9022N	i-Sensys MF4010	LaserJet M1522nf	SCX-4500
Rating	★★★★	★★★★★	★★★	★★★★	★★★★	★★	★★★★★	★★★	★★★
Maximum native resolution	Not disclosed	600x600dpi	600x600dpi	600x600dpi	1,200x1,200dpi	1,200x1,200dpi	600x600dpi	600x600dpi	Not disclosed
Maximum enhanced resolution	1,200x600dpi	2,400x600dpi	2,400x600dpi	1,200x1,200dpi	N/A	N/A	1,200x600dpi	600x1,200dpi	600x600dpi
Maximum optical scan resolution (output bit depth)	N/A	N/A	N/A	N/A	N/A	N/A	600x600dpi (24-bit)	1,200dpi (24-bit)	600x2,400dpi (not disclosed)
QUOTED SPEEDS									
Quoted speed, A4	20ppm	12ppm	22ppm	24ppm	28ppm	20ppm	20ppm	23ppm	16ppm
Quoted warm-up time	Not disclosed	0s	21s	0s	14s	40s	0s	0s	Not disclosed
Quoted time to first page	10s	9s	10s	7s	6s	10s	9s	9s	15s
Total quoted time to first print	N/A	9s	31s	7s	20s	50s	9s	9s	N/A
TESTED SPEEDS									
First page from sleep	26s	14s	22s	15s	18s	41s	15s	15s	21s
Letter, time to first page	13s	12s	11s	9s	8s	14s	10s	11s	21s
25-page text document, total time	1m 27s (17.2ppm)	2m 21s (10.6ppm)	1m 17s (19.5ppm)	1m 11s (21.1ppm)	58s (25.9ppm)	1m 20s (18.8ppm)	1m 22s (18.3ppm)	1m 13s (20.5ppm)	1m 43s (14.6ppm)
24-page mixed text and graphics document, total time	1m 34s (15.3ppm)	2m 12s (10.9ppm)	1m 24s (17.1ppm)	1m 40s (14.4ppm)	59s (24.4ppm)	1m 48s (13.3ppm)	1m 45s (13.7ppm)	2m 41s (8.9ppm)	2m 12s (10.9ppm)
Two greyscale 10x8in photos, total time	25s	25s	46s	23s	16s	47s	27s	34s	31s
Six greyscale 6x4in photos, total time	40s	29s	53s	37s	18s	1m 21s	35s	39s	36s
TESTED SCAN SPEEDS									
Full scan area preview	N/A	N/A	N/A	N/A	N/A	N/A	16s	31s	11s
A4 document at 150dpi/300dpi	N/A	N/A	N/A	N/A	N/A	N/A	15s/31s	6s/13s	13s/32s
6x4in print at 600dpi/1,200dpi	N/A	N/A	N/A	N/A	N/A	N/A	36s/N/A	1m 1s/3m 33s	27s/N/A
Single 35mm negative at 2,400dpi	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TESTED COPY SPEEDS									
Single A4 page, default quality	N/A	N/A	N/A	N/A	N/A	N/A	10s	10s	12s
10 A4 pages (many to many), default quality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	53s	N/A
PHYSICAL AND ENVIRONMENTAL									
Standard interfaces	USB	USB Hi-Speed	USB Hi-Speed	USB Hi-Speed, 10/100 Ethernet	Parallel, USB Hi-Speed	Parallel, USB Hi-Speed, 10/100 Ethernet	USB Hi-Speed	USB Hi-Speed, 10/100 Ethernet	USB Hi-Speed
Optional interfaces	None	10/100 Ethernet with Axis 1650 Print Server	None	None	None	None	10/100 Ethernet with Axis 1650 Print Server	None	None
Dimensions (HxWxD)	217x358x299mm	251x370x217mm	360x475x454mm	225x379x243mm	255x378x390mm	278x358x425mm	297x390x432mm	402x496x406mm	165x332x393mm
Weight	5.5kg	6.4kg	6.8kg	5.9kg	11.5kg	10.0kg	12.7kg	11.0kg	8.6kg
Noise	53dB(A)	48dB(A)	51dB(A)	Not disclosed	55dB(A)	51dB(A)	66dB(A)	52dB(A)	45dB(A)
Duty cycle (pages per month)	5,000 pages	Not disclosed	10,000 pages	8,000 pages	20,000 pages	30,000 pages	10,000 pages	8,000 pages	5,000 pages
Power consumption standby	4W	1W	3W	2W	2W	10W	1W	9W	6W
Power consumption idle	4W	1W	4W	3W	7W	11W	4W	9W	6W
Power consumption active	Not disclosed	259W (average)	460W (maximum)	300W (maximum)	840W (maximum)	400W (average)	650W (maximum)	410W (maximum)	350W average
PAPER HANDLING									
Maximum paper size	A4/legal, custom length up to 356mm	A4/legal, custom length up to 356mm	A4	A4	A4	A4	A4	A4	A4
Maximum paper weight	160gsm	163gsm	105gsm	163gsm	220gsm	163gsm	163gsm	163gsm	160gsm
Standard paper inputs (capacity)	2 (151)	2 (151)	2 (251)	2 (260)	2 (300)	2 (300)	2 (260)	2 (260)	1 (100)
Maximum paper inputs (capacity)	2 (151)	2 (151)	2 (251)	2 (260)	4 (800)	3 (550)	2 (260)	2 (260)	1 (100)
Output tray capacity	100 sheets	100 sheets	100 sheets	150 sheets	194 sheets	150 sheets	100 sheets	125 sheets	30 sheets
Duplex	No	No	No	No	Yes	No	No	No	No
Automatic Document Feeder capacity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	50	N/A
COPY FEATURES									
Maximum number of copies	N/A	N/A	N/A	N/A	N/A	N/A	99	99	99
Copier zoom range	N/A	N/A	N/A	N/A	N/A	N/A	50-200%	25-400%	50-199%
Maximum mono copy resolution	N/A	N/A	N/A	N/A	N/A	N/A	600x600dpi	600x600dpi	600x600dpi
FAX FEATURES									
Fax modem	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33.6Kbit/s	N/A
Maximum mono fax resolution	N/A	N/A	N/A	N/A	N/A	N/A	N/A	300x300dpi	N/A
Maximum memory capacity (mono pages)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	300	N/A
GENERAL									
Technology	Mono laser	Mono laser	Mono laser	Mono laser	Mono laser	Mono laser	Mono laser	Mono laser	Mono laser
Language(s)	Host-based	Host-based	Host-based	PCL 5e	PCL5e, PCL6, PostScript3, PDF 1.3, ESC/Page(B/W), FX, ESCP2, i239X	Host-based	Host-based	PCL6, PCL5e	Host-based
Supported operating systems	Windows 98/Me/2000/XP/Vista, Mac OS X 10.3, Linux	Windows 98/Me/2000/XP/Server 2003/Vista, Linux	Windows 2000/XP/XP-64/Server 2003/Vista, Mac OS X 10.2.4+, Linux	Windows 2000/XP/XP-64/Server 2003/Vista, Mac OS X 10.2.8/10.3/10.4+, Linux	Windows 2000/XP/XP-64/Server 2003/Vista/10.2.8+, Linux, Unix	Windows 95/98/Me/NT/2000/XP/Vista, Mac OS X via PostScript PPD, Linux	Windows 2000/XP/2003/Vista, Mac OS X 10.2-10.4.6	Windows 2000/2003/XP/XP-64/Vista, Mac OS X 10.3+, Linux, Solaris, Novell Netware, HP-UX, AIX 3.2.5 or higher, MPE-iX, Citrix MetaFrame	Windows 2000/2003/XP/Vista, Mac OS 10.3-10.4, Linux
Memory, standard (maximum)	8MB (8MB)	2MB (2MB)	8MB (8MB)	32MB (32MB)	32MB (288MB)	16MB (144MB)	32MB (32MB)	64MB (64MB)	8MB (8MB)
Other features and options	None	None	None	Three-year onsite warranty upgrade U9811E, £54 inc VAT	Warranty extension to three years (ECPGRP35), £68 inc VAT	Three-year extended warranty (SP9022C), £86 inc VAT, PostScript Emulation (PDL) includes Barcode Emulation (043391), £100 inc VAT	None	None	None
BUYING INFORMATION									
Price including VAT	£43	£61	£83	£156	£194	£208	£105	£122	£190
Price per mono A4 page including VAT	1.82p	1.77p	1.54p	2.01p	1.28p	1.78p	2.10p	2.02p	2.10p
Price for second paper cassette including VAT	N/A	N/A	N/A	N/A	250-sheet C12C802461, £150	250-sheet 043374, £76	N/A	N/A	N/A
Capacity of supplied black toner (pages)	1,000 pages	2,000 pages	1,000 pages	1,000 pages	2,000 pages	3,500 pages	2,000 pages	1,000 pages	1,000 pages
Capacity of supplied drum/s (pages)	Replaced with toner	Replaced with toner	12,000 pages	Replaced with toner	Replaced with toner	Replaced with toner	Replaced with toner	Replaced with toner	Replaced with toner
Estimated total ownership cost – three years' light use (3,600 pages)	£97	£186	£122	£236	£353	£297	£147	£236	£274
Estimated total ownership cost – three years' medium use (21,000 pages)	£424	£504	£457	£559	£557	£552	£528	£559	£610
Estimated total ownership cost – three years' heavy use (108,000 pages)	£2,006	£2,026	£2,202	£2,332	£1,680	£2,081	£2,346	£2,332	£2,437
Warranty duration and terms	One year RTB	One year RTB	One year onsite	One year RTB	One year onsite	Two years onsite	One year RTB	One year RTB	One year RTB
Supplier	www.rsupplies.co.uk	www.lambda-tek.com/componentshop	www.printerbase.co.uk	www.lambda-tek.com/componentshop	www.ameiva.co.uk	www.it247.com	www.ameiva.co.uk	www.lambda-tek.com/componentshop	www.novatech.co.uk
Details	www.samsung.co.uk	www.canon.co.uk	www.brother.co.uk	www.hp.co.uk	www.epson.co.uk	www.tallygenicom.co.uk	www.canon.co.uk	www.hp.co.uk	www.samsung.co.uk
Part code	ML-2010R/XEU	0017B041AA	HL2140ZU1	CB413A	C11CA07051BX	043371	1483B072AA	CB534A	SCX-4500/XEU